

General

Title

Pressure ulcer prevention and treatment protocol: percentage of patients with documentation in the medical record indicating a risk assessment (using the Braden Scale or Braden Q) was completed upon admission.

Source(s)

Institute for Clinical Systems Improvement (ICSI). Pressure ulcer prevention and treatment protocol. Health care protocol. Bloomington (MN): Institute for Clinical Systems Improvement (ICSI); 2012 Jan. 88 p. [112 references]

Measure Domain

Primary Measure Domain

Clinical Quality Measures: Process

Secondary Measure Domain

Does not apply to this measure

Brief Abstract

Description

This measure is used to assess the percentage of patients with documentation in the medical record indicating a risk assessment (using the Braden Scale or Braden Q) was completed upon admission.

Rationale

The priority aim addressed by this measure is to accurately identify patients at risk of developing a pressure ulcer in the inpatient and outpatient care setting.

Pressure ulcers have been associated with an extended length of hospitalization, sepsis and mortality. In fact, nearly 60,000 United States hospital patients are estimated to die each year from complications due to hospital-acquired pressure ulcers. The estimated cost of managing a single full-thickness pressure ulcer is as high as \$70,000, and the total cost for treatment of pressure ulcers in the United States is

estimated at \$11 billion per year. Furthermore, the prevalence of pressure ulcers in health care facilities is increasing. Pressure ulcer incidence rates vary considerably by clinical setting, ranging from 0.4% to 38% in acute care, from 2.2% to 23.9% in long-term care, and from 0% to 17% in home care.

Pressure ulcer assessment includes determining a person's risk for pressure ulcer development and inspection of skin condition, particularly over bony prominences, beneath clothing and under devices. For all inpatients, assess risk for pressure ulcer development at time of admission using a validated risk assessment tool. Reevaluate the risk for pressure ulcer development daily and with any change in level of care or condition such as surgery, transfer to or from intensive care unit, change in nutritional status or level of mobility, or as indicated for the care setting.

The Braden Scale for Predicting Pressure Sore Risk (Braden Scale) is the most commonly used validated tool for predicting patients at risk for pressure ulcer development. Although the sensitivity and specificity for predicting pressure ulcer risk are high for the Braden Scale, it serves as an adjunct to clinical judgment regarding each individual. It is important for the health care team to use the Braden score as a guideline in planning interventions aimed at prevention.

The Braden Scale was developed and tested for the adult population. The Braden Q is a modified Braden Scale for use in pediatric patients up to age 18 years. The Braden Q consists of seven subscales: mobility, activity, sensory perception, skin moisture, friction and shear, nutrition and tissue perfusion/oxygenation.

Evidence for Rationale

Ayello EA, Braden B. How and why to do pressure ulcer risk assessment. *Adv Skin Wound Care*. 2002 May-Jun;15(3):125-131. [PubMed](#)

Baranoski S. *Wound care essentials: practice principles*. 2nd ed. Ambler (PA): Lippincott Williams & Wilkins; 2008.

Butler CT. Pediatric skin care: guidelines for assessment, prevention, and treatment. *Dermatol Nurs*. 2007 Oct;19(5):471-2, 477-82, 485. [PubMed](#)

Institute for Clinical Systems Improvement (ICSI). *Pressure ulcer prevention and treatment protocol*. Health care protocol. Bloomington (MN): Institute for Clinical Systems Improvement (ICSI); 2012 Jan. 88 p. [112 references]

Lyder CH. Pressure ulcer prevention and management. *JAMA*. 2003 Jan 8;289(2):223-6. [PubMed](#)

Quigley SM, Curley MA. Skin integrity in the pediatric population: preventing and managing pressure ulcers. *J Soc Pediatr Nurs*. 1996 Apr-Jun;1(1):7-18. [35 references] [PubMed](#)

Reddy M, Gill SS, Rochon PA. Preventing pressure ulcers: a systematic review. *JAMA*. 2006 Aug 23;296(8):974-84. [101 references] [PubMed](#)

Redelings MD, Lee NE, Sorvillo F. Pressure ulcers: more lethal than we thought. *Adv Skin Wound Care*. 2005 Sep;18(7):367-72. [PubMed](#)

Primary Health Components

Pressure ulcer; risk assessment; Braden Scale for Predicting Pressure Sore Risk (Braden Scale); Braden Q Scale

Denominator Description

Number of patients admitted to the hospital

Numerator Description

Number of patients who had pressure ulcer risk assessment done upon admission into the hospital using the Braden Scale or Braden Q

Evidence Supporting the Measure

Type of Evidence Supporting the Criterion of Quality for the Measure

A clinical practice guideline or other peer-reviewed synthesis of the clinical research evidence

Additional Information Supporting Need for the Measure

- It is estimated that pressure ulcer prevalence (the percentage of patients with pressure ulcers at any one point in time) in acute care is 15%, while incidence (the rate at which new cases occur in a population over a given time period) in acute care is 7%.
- The Minnesota Health Department's Adverse Health Events report from 2003 to 2010 showed 249 patients developed hospital-acquired stage III or IV unstageable pressure ulcers (reportable events). In reporting year 2010, 30% of stage III, IV and unstageable pressure ulcers reported under Minnesota's Adverse Health Care Event Reporting Law were classified as device-related pressure ulcers. The majority of the devices involved were cervical collars.
- Research has identified age as a risk factor for developing pressure ulcers in correlation with factors such as low blood pressure, temperature, and poor protein intake. Advancing age, along with other risk factors, increases the risk for pressure ulcer development. The existence of comorbid conditions such as cardiovascular and endocrine diseases may contribute to increased vulnerability for the development of pressure ulcers.

Evidence for Additional Information Supporting Need for the Measure

Bergstrom N, Braden B. A prospective study of pressure sore risk among institutionalized elderly. J Am Geriatr Soc. 1992 Aug;40(8):747-58. [PubMed](#)

Cuddigan J, Berlowitz DR, Ayello EA. Pressure ulcers in America: prevalence, incidence, and implications for the future. An executive summary of the National Pressure Ulcer Advisory Panel monograph. Adv Skin Wound Care. 2001 Jul-Aug;14(4):208-15. [PubMed](#)

Institute for Clinical Systems Improvement (ICSI). Pressure ulcer prevention and treatment protocol. Health care protocol. Bloomington (MN): Institute for Clinical Systems Improvement (ICSI); 2012 Jan. 88 p. [112 references]

Minnesota Department of Health. Adverse health events in Minnesota: seventh annual public report. 2011 Jan.

Stechmiller JK, Cowan L, Whitney JD, Phillips L, Aslam R, Barbul A, Gottrup F, Gould L, Robson MC, Rodeheaver G, Thomas D, Stotts N. Guidelines for the prevention of pressure ulcers. Wound Repair Regen. 2008 Mar-Apr;16(2):151-68. [PubMed](#)

Extent of Measure Testing

Unspecified

State of Use of the Measure

State of Use

Current routine use

Current Use

not defined yet

Application of the Measure in its Current Use

Measurement Setting

Hospital Inpatient

Professionals Involved in Delivery of Health Services

not defined yet

Least Aggregated Level of Services Delivery Addressed

Single Health Care Delivery or Public Health Organizations

Statement of Acceptable Minimum Sample Size

Unspecified

Target Population Age

All ages

Target Population Gender

Either male or female

National Strategy for Quality Improvement in Health Care

National Quality Strategy Aim

Better Care

National Quality Strategy Priority

Health and Well-being of Communities

Prevention and Treatment of Leading Causes of Mortality

Institute of Medicine (IOM) National Health Care Quality Report Categories

IOM Care Need

Getting Better

Staying Healthy

IOM Domain

Effectiveness

Data Collection for the Measure

Case Finding Period

The time frame pertaining to data collection is monthly.

Denominator Sampling Frame

Patients associated with provider

Denominator (Index) Event or Characteristic

Institutionalization

Denominator Time Window

not defined yet

Denominator Inclusions/Exclusions

Inclusions

Number of patients admitted to the hospital

Exclusions

Unspecified

Exclusions/Exceptions

not defined yet

Numerator Inclusions/Exclusions

Inclusions

Number of patients who had pressure ulcer risk assessment done upon admission into the hospital using the Braden Scale or Braden Q

Exclusions

Unspecified

Numerator Search Strategy

Institutionalization

Data Source

Electronic health/medical record

Type of Health State

Does not apply to this measure

Instruments Used and/or Associated with the Measure

- Braden Scale for Predicting Pressure Sore Risk (Braden Scale)
- Braden Q Scale

Computation of the Measure

Measure Specifies Disaggregation

Does not apply to this measure

Scoring

Rate/Proportion

Interpretation of Score

Desired value is a higher score

Allowance for Patient or Population Factors

not defined yet

Standard of Comparison

not defined yet

Identifying Information

Original Title

Percentage of patients with documentation in the medical record indicating a risk assessment (using the Braden Scale or Braden Q) was completed upon admission.

Measure Collection Name

Pressure Ulcer Prevention and Treatment Protocol

Submitter

Institute for Clinical Systems Improvement - Nonprofit Organization

Developer

Institute for Clinical Systems Improvement - Nonprofit Organization

Funding Source(s)

The following Minnesota health plans provide direct financial support: Blue Cross and Blue Shield of Minnesota, HealthPartners, Medica, Security Health Plan of Wisconsin, and UCare. In-kind support is provided by the Institute for Clinical Systems Improvement's (ICSI) members.

Composition of the Group that Developed the Measure

Work Group Members: Deb Perry, RN (*Work Group Leader*) (Olmsted Medical Center) (Nursing); Kathleen Borchert, MS, RN, CWO CN, ACNS-BC (HealthEast Care System) (Certified Wound Care Specialist); Bhavin Patel, MD (HealthPartners Medical Group and Regions Hospital) (Internal Medicine); Sandy Burke, RN (Olmsted Medical Center) (Nursing); Katherine Chick, RN, CNS (Mayo Clinic) (Nursing); Wendy Kraft, RN, BSN, CWO CN (North Memorial) (Nursing); Susan Thompson, MS, RN (Mayo Clinic) (Nursing); Kari Retzer, RN (Institute for Clinical Systems Improvement) (Facilitator)

Financial Disclosures/Other Potential Conflicts of Interest

In the interest of full disclosure, the Institute for Clinical Systems Improvement (ICSI) has adopted a policy of revealing relationships work group members have with companies that sell products or services that are relevant to this protocol topic. It is not assumed that these financial interests will have an adverse impact on content. They are simply noted here to fully inform users of the protocol.

Kathy Borchert, MS, RN, CWO CN, ACNS-BC, reviews documentation and provides expert testimony related to pressure ulcer cases.

No other work group members have potential conflicts of interest to disclose.

Adaptation

This measure was not adapted from another source.

Date of Most Current Version in NQMC

2012 Jan

Measure Maintenance

Scientific documents are revised every 12 to 24 months as indicated by changes in clinical practice and literature.

Date of Next Anticipated Revision

The next scheduled revision will occur within 24 months.

Measure Status

This is the current release of the measure.

The measure developer reaffirmed the currency of this measure in January 2016.

Measure Availability

Source available from the [Institute for Clinical Systems Improvement \(ICSI\) Web site](#)

.

For more information, contact ICSI at 8009 34th Avenue South, Suite 1200, Bloomington, MN 55425; Phone: 952-814-7060; Fax: 952-858-9675; Web site: www.icsi.org ; E-mail: icsi.info@icsi.org.

NQMC Status

This NQMC summary was completed by ECRI Institute on February 13, 2013.

The information was reaffirmed by the measure developer on January 13, 2016.

Copyright Statement

This NQMC summary (abstracted Institute for Clinical Systems Improvement [ICSI] Measure) is based on the original measure, which is subject to the measure developer's copyright restrictions.

The abstracted ICSI Measures contained in this Web site may be downloaded by any individual or organization. If the abstracted ICSI Measures are downloaded by an individual, the individual may not distribute copies to third parties.

If the abstracted ICSI Measures are downloaded by an organization, copies may be distributed to the organization's employees but may not be distributed outside of the organization without the prior written consent of the Institute for Clinical Systems Improvement, Inc.

All other copyright rights in the abstracted ICSI Measures are reserved by the Institute for Clinical Systems Improvement, Inc. The Institute for Clinical Systems Improvement, Inc. assumes no liability for

any adaptations or revisions or modifications made to the abstracts of the ICSI Measures.

Production

Source(s)

Institute for Clinical Systems Improvement (ICSI). Pressure ulcer prevention and treatment protocol. Health care protocol. Bloomington (MN): Institute for Clinical Systems Improvement (ICSI); 2012 Jan. 88 p. [112 references]

Disclaimer

NQMC Disclaimer

The National Quality Measures Clearinghouse[®] (NQMC) does not develop, produce, approve, or endorse the measures represented on this site.

All measures summarized by NQMC and hosted on our site are produced under the auspices of medical specialty societies, relevant professional associations, public and private organizations, other government agencies, health care organizations or plans, individuals, and similar entities.

Measures represented on the NQMC Web site are submitted by measure developers, and are screened solely to determine that they meet the [NQMC Inclusion Criteria](#).

NQMC, AHRQ, and its contractor ECRI Institute make no warranties concerning the content or its reliability and/or validity of the quality measures and related materials represented on this site. Moreover, the views and opinions of developers or authors of measures represented on this site do not necessarily state or reflect those of NQMC, AHRQ, or its contractor, ECRI Institute, and inclusion or hosting of measures in NQMC may not be used for advertising or commercial endorsement purposes.

Readers with questions regarding measure content are directed to contact the measure developer.